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A NEW SPECIES OF *TRICHOGRAMMA* (HYMENOPTERA: TRICHOGRAMMATIDAE), WITH NOTES ON OTHER SPECIES COLLECTED IN GUATEMALA

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Abstract.—*Trichogramma* ***atopovirilia,*** a new species from Guatemala, is described and compared with other species of *Trichogramma.* Presently, it is known only from *Vanessa* sp. (Lepidoptera: Nymphalidae) eggs collected from *Malva* near Solola, Solola State, Guatemala, and from sweeping vegetation southwest of Ocozocoautla, Chiapas State, Mexico. Notes on *T. pretiosum* and *T. exiguum,* also collected in Guatemala, are given.

While on foreign exploration in Guatemala in 1977 to collect parasites of gelechiid pests on solanaceous crops, lepidopterous eggs also were collected from various host plants by the senior author and held for emergence of *Trichogramma* and other egg parasites. A new species of *Trichogramma* thus obtained is described herein, with notes on other species present in the collections. The description is based on freshly killed specimens mounted in Hoyers solution on glass slides. The cover slips were ringed with Glyptal® to help preserve the specimens.

Trichogramma atopovirilia Oatman and Platner, New Species

Fig. 1

Female dark brown; head and abdomen darker than rest of body; antenna infuscate; coxa and femur of hindleg and coxa of foreleg dark brown; legs yellow except trochanter of hindleg, coxa of midleg, and last tarsal segment of all legs infuscate. Male thorax and abdomen dark brown; head and antenna yellowish brown; legs light yellow except coxa and femur of hindleg dark brown and last tarsal segment of all legs infuscate.

Holotype male.—Antenna with flagellum 0.14 as wide as long (0.032 × 0.230 mm) and 1.14 as long as hindtibia (0.202 mm); flagellar setae 46 in number, longest seta (0.108 mm) 3.36 as long as maximum width of flagellum (0.032 mm). Forewing with 30 setae between 4th and 5th vein tracts; longest seta (0.053 mm) on postapical margin 1.77 as long as maximum width of hindtibia (0.030 mm). Mesoscutellum with anterior pair of setae short and fine, ca. 1/5 length of posterior pair. Genital capsule 0.55 as wide as long (0.076 × 0.138 mm); DEG (0.115 mm long), CS (0.131 mm long), and MVP (0.108 mm long) attaining 0.83, 0.95, and 0.78 the length of genital capsule, respectively. Aedeagus (0.136 mm long) 0.67 length of hindtibia and 0.98 length of genital capsule.

Male.—Antenna (Fig. 1c) with flagellum slightly curved, 0.15 ± 0.004 (0.14–

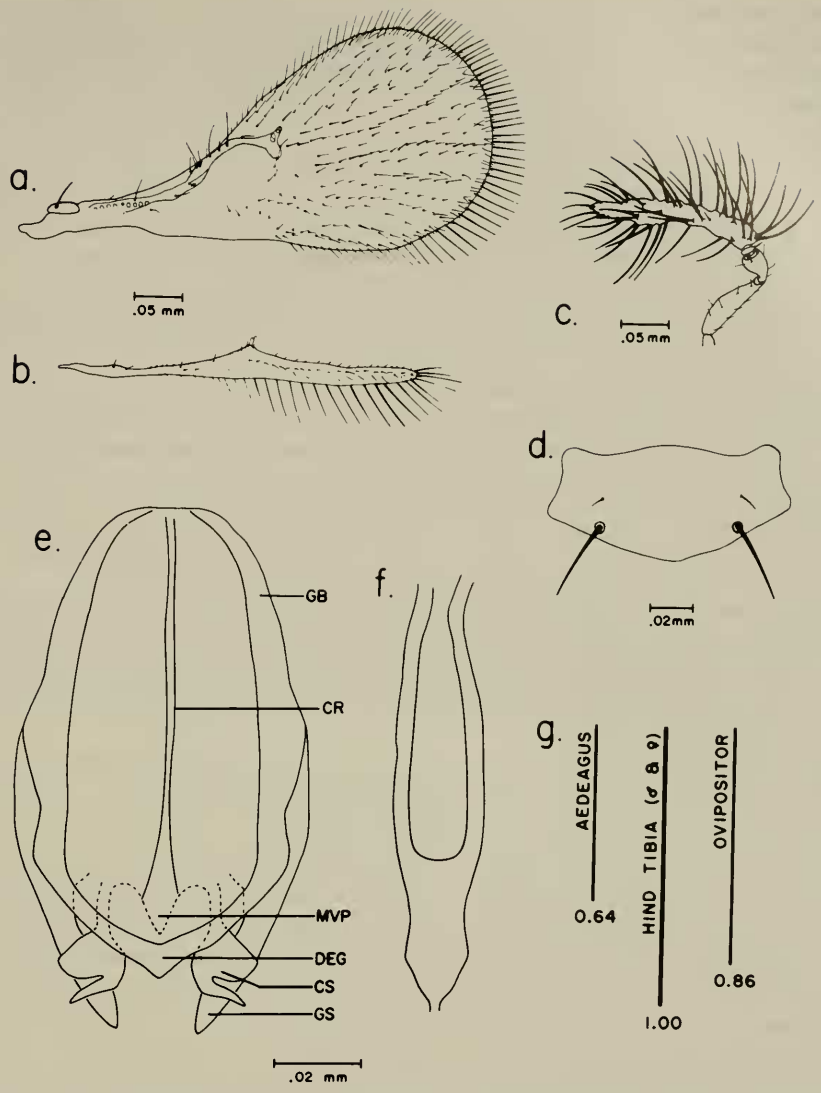

Fig. 1. *Trichogramma atopovirilia*. a, Forewing. b, Hindwing. c, Male antenna. d, Mesoscutellum. e, Genital capsule. f, Aedeagus. g, Ratio of aedeagus and ovipositor to hindtibia of male and female, respectively. See text for explanation of abbreviations.

0.16) ($n = 5$) as wide as long, and 1.15 ± 0.01 (1.14–1.18) ($n = 5$) as long as hindtibia; flagellar setae long, gradually tapering from base to fine point, 46.0 ± 0.71 (44–48) ($n = 5$) in number, length of longest seta 3.09 ± 0.09 (2.85–3.36) ($n = 5$) as long as maximum width of flagellum.

Forewing (Fig. 1a) with vein tracts relatively well defined, area between 4th and 5th tracts (i.e., the 2 tracts posterior to RS_2) with a mean of 21.4 (18–30) ($n = 5$) setae; longest seta on postapical margin 1.72 ± 0.03 (1.67–1.82) ($n = 5$) as long as maximum width of hindtibia.

Hindwing (Fig. 1b) with middle vein tract prominent and complete to apex; anterior tract absent; posterior tract equally as prominent as middle tract, extending almost to apex; setae on middle and posterior tracts equally as long.

Mesoscutellum (Fig. 1d) with anterior pair of setae short, fine, ca. 1/5 length of posterior pair.

Genital capsule (Fig. 1e) 0.57 ± 0.01 (0.55–0.58) (n = 5) as wide as long; dorsal expansion of gonobase (DEG) broad, abruptly rounded posteriorly, with blunt subtriangular tip apically, sides slightly concave without basal constriction, moderately to lightly sclerotized; DEG well below chelate structure (CS) and extending 0.88 ± 0.01 (0.83–0.90) (n = 5) length of genital capsule; CS extending 0.95 ± 0.004 (0.94–0.96) (n = 5) length of genital capsule; median ventral projection (MVP) broad, bluntly pointed, distinctly anterior to CS and DEG, extending 0.80 ± 0.003 (0.78–0.80) (n = 5) length of genital capsule. Chitinized ridge (CR) extending almost the length of genital capsule. Aedeagus (Fig. 1f) constricted near apex, 0.93 ± 0.03 (0.82–0.98) (n = 5) length of genital capsule and 0.64 ± 0.02 (0.57–0.68) (n = 5) length of hindtibia; apodemes comprising ca. ⅔ length of aedeagus.

Female.—Ovipositor (0.173 mm) 0.86 (n = 1) length of hindtibia (0.200 mm) (Fig. 1g).

Type information.—Holotype ♂ reared from a *Vanessa* sp. egg (Lepidoptera: Nymphalidae) collected from *Malva* sp. near Solola, Solola State, Guatemala, on Feb. 16, 1977, by Earl R. Oatman. Allotype ♀, same data as holotype. The holotype and allotype are deposited in the collection of the National Museum of Natural History, Washington, D.C.

Material examined.—GUATEMALA: Solola (type-locality, see above), 5 ♂, 1 ♀; MEXICO: Chiapas State, ca. 30 km southwest of Ocozocoautla, 1 ♂, collected by sweeping on June 30, 1981, by Mr. John LaSalle.

Remarks.—This species is readily separated from other known species of *Trichogramma* by the unique "stalked" CS, blackish coloration of both the CS and MVP (margin connecting the two structures), the posteriorly-broad, rounded DEG, and the shape of the aedeagus. *Trichogramma bennetti* Nagaraja and Nagarkatti, a West Indian species, is closest in respect to the CS and DEG (Nagaraja and Nagarkatti, 1973). However, *T. bennetti* differs from *T. atopovirilia* by having the CS less apically expanded and a bulbous DEG which extends well beyond the MVP and reaches level of CS. In *T. atopovirilia* the apical width of DEG is subequal to the width of the genital capsule, whereas the apical width of the DEG is considerably less in *T. bennetti*. The aedeagus of *T. atopovirilia* is most comparable to *T. julianoi* except that the apodemes account for only ca. ⅔ the length of the aedeagus compared to 4/5 its length in *T. julianoi* (Platner and Oatman, 1981).

The specific name refers to the highly distinctive male genitalia of this species.

Other species of *Trichogramma* present in the collections include *T. pretiosum* Riley and *T. exiguum* Pinto and Platner. *Trichogramma pretiosum* was reared from unknown noctuid eggs collected from tomato plants near San Lucas Toliman, Solola State, on Feb. 15; from *Vanessa* sp. eggs from *Malva* sp. and unknown noctuid eggs from potato near Solola, Solola State, on Feb. 16; from unknown noctuid eggs collected from tomato near Sumpango, Sacatepéquez State, on Feb. 18; and from *Heliothis* sp. eggs from field corn near El Progresso, El Progresso

State, on Feb. 19. *Trichogramma exiguum* was reared from unknown noctuid eggs collected from tomato near Sumpango, Sacatepéquez State, on Feb. 18. These represent new locality records for both species which previously have been reported from other Central and South American countries (Pinto et al., 1978; Pinto et al., 1983) as well as from the southern United States and Mexico. As in the Guatemala collections, *T. pretiosum* is by far the most common of these two species.

Acknowledgments

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